

A Psychological Profile of Children With Hemangiomas and Their Families

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Objective: To assess the psychosocial impact of hemangiomas and their treatment on children with the disease and their families.

Design: Thirty-nine children who were treated for hemangiomas were examined by a questionnaire that addressed the emotional attitudes of the parent and child toward the disease and the related treatment.

Setting: Two private ambulatory surgery centers (in Latham and Charleston).

Results: Overall, the survey found a negative effect on the child's family, with considerable fear caused in part by adverse public commentary or attitudes—which was ameliorated by education from the primary care provider and specialist. However, the family's perception was

that the child was not deeply affected by his or her condition and that treatment (laser, intralesional corticosteroids, oral corticosteroids, surgery, or a combination) did not change the child's emotional response to the disease. However, most parents observed that their child was too young to appreciate his or her malady.

Conclusion: Given earlier intervention for children with late-involuting hemangiomas and the advent of more effective therapies, our survey did not seem to indicate that the children experienced significant emotional trauma from their condition; nevertheless, their families experienced appreciable emotional and psychological distress.

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HEMANGIOMAS ARE the most common neoplasm of infancy and childhood, with an estimated prevalence of 1% to 3% of all neonates^{1,2} and of 10% of infants by the age of 1 year.^{3,4} Most hemangiomas arise in the head and neck region (60%), and 20% of patients may have more than one lesion.⁵ Given these facts and that hemangiomas may be unsightly birthmarks (**Figures 1, 2, 3, and 4**), the psychological stress on the developing child and family cannot be underestimated. Hemangiomas exhibit a natural history of proliferation during the first year of life—a fact that may only further compound familial anxieties about the child's condition. However, only a few hemangiomas actually require intervention, because they often tend to involute before the age when the child should enter school. Most hemangiomas undergo involution during the second year of life, and may completely regress.

If these often disfiguring vascular lesions do not involute early, they may have profound psychosocial effects on the child

and family, and may lead at times to accusations of child abuse and other misconceptions, as this study will show. In addition, reports of late-involuting hemangiomas have found a high incidence of a marked residual deformity. Although several studies⁶⁻¹² have investigated the impact that port-wine stains, or capillary vascular malformations, have on the child's psyche and the benefit that treatment affords, fewer studies¹³⁻¹⁵ exist that examine the psychological ramifications of hemangiomas on the child and family.

Technological advances in the treatment of vascular lesions have also been remarkable and have kept stride with intellectual gains. Before the introduction of laser therapy, many individuals were left only with the option of cosmetic camouflage. The earlier laser types, the argon and Nd:YAG lasers, often led to undesirable scarring, an adverse effect rarely encountered with the pulsed dye laser. Some researchers¹⁶ still advocate the efficacy of interstitial potassium-titanyl-phosphate and Nd:YAG lasers when treating the deeper component of the hemangioma not ame-

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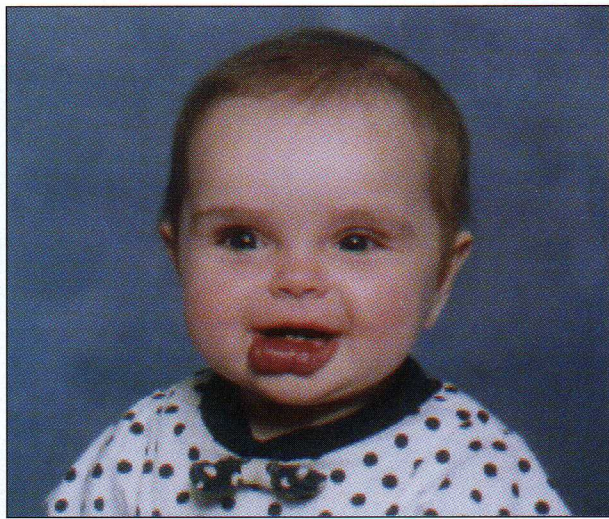


Figure 1. A child with a rapidly expanding hemangioma of the lower lip at the age of 9 months, after oral corticosteroid therapy and immediately before 3 pulsed dye laser treatments.



Figure 3. A child with a nasal tip hemangioma before any treatments.



Figure 2. The child from Figure 1 at the age of 3 years, 1 year after surgery, which was performed because of the late-involuting nature of the lesion.



Figure 4. The child from Figure 3, after undergoing 3 pulsed dye laser treatments for a rapidly expanding hemangioma of the nasal tip and surgery to address the noninvoluting nature of the lesion.

nable to the pulsed dye laser. Pharmacological intervention with corticosteroids (intralesional and systemic), interferon alfa-2a and -2b, and bleomycin sulfate has been investigated and implemented with varying success.¹⁷⁻¹⁹ Surgery has remained a mainstay of therapy for those lesions that are refractory to the previously described methods or that are deemed more suitable to surgical debulking.

Given the recent advances in hemangioma management and the relative paucity of literature on the psychological sequelae of this disease, this article is intended to address these deficiencies and to provide a meaningful contribution to our understanding of the untoward psychological effects that hemangiomas may have on the child and family.

METHODS

Thirty-nine families were interviewed by telephone about their child's hemangioma using a 38-point questionnaire that covered the child's birth history, the natural history of the heman-

gioma, physician encounters, treatment interventions, and the family's and child's emotional attitudes toward the hemangioma and related treatment. Initially, 112 medical records were evaluated for this study, but most were excluded from inclusion because of the presence of a vascular malformation rather than a true hemangioma, the lack of any therapy administered, or the inability to contact the family. Of the 39 patients, one of us (E.F.W.) treated 19 and another one of us (M.H.) treated the other 20. The female-male ratio was 29:10.

RESULTS

BIRTH HISTORY

The birth history of the child reveals a high incidence of complications (14 [36%] of 39), which included preeclampsia (n=4), prematurity (n=1), traumatic birth (n=2), hyperemesis (n=2), gestational diabetes mellitus (n=2), twin-twin transfusion (n=2), and failure to thrive (n=1). The one case of prematurity occurred at

